

CLAIMS

What is claimed is:

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1. A method for providing a user interface for controlling devices that are currently connected to a network, the method comprising the steps of:

for at least one of said devices:

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(a) obtaining information from one or more of the devices currently connected to the network, said information including device information; and

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(b) generating a user interface description based at least on the obtained information, the user interface description including a reference associated with the device information of each of said devices currently connected to the network, such that the reference includes at least one link to information contained in said devices currently connected to the network.

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2. The method of claim 1, wherein the step (b) further includes the steps of generating the user interface description such that the reference in the user interface description provides access to at least the information in each corresponding device.

3. The method of claim 1, wherein the step (b) further includes the steps of generating the user interface description such that the user interface description further includes device data corresponding to each device based on the information obtained from each device.

4. The method of claim 1, wherein the step (b) of generating the user interface description further includes the steps of associating a hyper-text link with the device information of each of said devices currently connected to the network.

5. The method of claim 1, wherein said information in each device comprises an HTML page contained in that device.

6. The method of claim 1, wherein the device information in each device includes device identification information.

7. The method of claim 1, wherein the device information in each device includes a user control interface description for user interaction with the device.

8. The method of claim 7, wherein the step (b) further includes the steps of generating the user interface description such that each reference in the user interface description is to at least the user control interface description in each corresponding device.

9. The method of claim 7, wherein the step (b) further includes the steps of generating the user interface description such that the user interface description further includes device data corresponding to each device based on the information obtained from each device, the device data providing reference to the user control interface description in each device.

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A3 10. A network system for performing a service, comprising:

a physical layer, wherein the physical layer provides a communication medium than can be used by devices to communicate with each other;

5 one or more devices connected to the physical layer, each device storing
information including device information;

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an agent in at least one device for:

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(a) obtaining information from one or more of the devices
currently connected to the network, said information including device
information; and

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(b) generating a user interface description based at least on the
obtained information, the user interface description including a reference
associated with the device information of each of said devices currently
connected to the network, such that the reference includes at least one
link to information contained in said devices currently connected to the
network.

11. The network system of claim 10 wherein the agent generates the user
interface description such that the reference in the user interface description provides
access to at least the information in each corresponding device.

12. The network system of claim 10, wherein the agent generates the user
interface description such that the user interface description further includes device
data corresponding to each device based on the information obtained from each
device.

13. The network system of claim 10, wherein the agent further associates a
hyper-text link in the user interface description with the device information of each of
said devices currently connected to the network.

14. The network system of claim 10, wherein said information in each device comprises an HTML page contained in that device.

15. The network system of claim 10, wherein the device information in each device includes device identification information.

16. The network system of claim 10, wherein the device information in each device includes a user control interface description for user interaction with the device.

17. The network system of claim 16, wherein the agent generates the user interface description such that each reference in the user interface description is to at least the user control interface description in each corresponding device.

18. The network system of claim 16, wherein the agent generates the user interface description such that the user interface description further includes device data corresponding to each device based on the information obtained from each device, the device data providing reference to the user control interface description in
5 each device.

19. The network system of claim 10 further comprising means for generating at least one user interface by using each reference in a user interface description to access the information in each corresponding device, and generating the user interface including device data corresponding to each device using the accessed information in
5 each device.

20. A network system for performing a service, comprising:

a physical layer, wherein the physical layer provides a communication medium than can be used by devices to communicate with each other;

multiple devices connected to the physical layer, one or more of said multiple devices storing information including device information, and one or more of said multiple devices each including an agent for:

(a) obtaining information from one or more of the devices currently connected to the network, said information including device information; and

(b) generating a user interface description based at least on the obtained information, the user interface description including a reference associated with the device information of each of said devices currently connected to the network, such that the reference includes at least one link to information contained in said devices currently connected to the network.

21. The network system of claim 20, wherein each agent generates a user interface description such that the reference in the user interface description provides access to at least the information in each corresponding device.

22. The network system of claim 20, wherein each agent generates a user interface description such that the user interface description further includes device data corresponding to each device based on the information obtained from each device.

23. The network system of claim 20, wherein each agent further associates a hyper-text link in a user interface description with the device information of each of said devices currently connected to the network.

24. The network system of claim 20, wherein said information in each device comprises an HTML page contained in that device.

25. The network system of claim 20, wherein the device information in each device includes device identification information.

26. The network system of claim 20, wherein the device information in each device includes a user control interface description for user interaction with the device.

27. The network system of claim 26, wherein each agent generates the user interface description such that each reference in the user interface description is to at least the user control interface description in each corresponding device.

28. The network system of claim 26, wherein each agent generates the user interface description such that the user interface description further includes device data corresponding to each device based on the information obtained from each device, the device data providing reference to the user control interface description in
5 each device.